mental faculties remain intact, excepting that the effect of the disease upon the mind is such as often to impair the ability to realize the extent of a serious affection.

In view of the fact that the body requires thirteen times more carbonaceous than nitrogenous food, for its sustenance, the daily consumption of carbon being 4,000 grains, that of nitrogen about 300 grains, the prime indication for treatment of a disease characterized by so large a percentage of waste of carbon as is manifest in phthisis, is a plentiful supply of easily combustible material. Such a material we have in alcohol, freed from the impurity of fusel oil, which latter is of slow oxidizable power and absolutely poisonous.

Experiment has shown that the combustion of one gramme of pure alcohol raises the temperature of seven liters of water one degree Centigrade. Cod-liver oil, in the same quantity, brings to a like degree of temperature nine liters. Hence, the relative heat-producing powers of alcohol, and the well-known nutrient oil are, as say, three to four. Calculated on the above basis, three and one-half ounces of cod-liver oil suffices to maintain one-third of the body heat for twenty-four hours, while about four ounces of alcohol, or about the quantity contained in a liter of light wine, serves the same purpose. There is this difference, however, between the two forms of nourishment. The oil, if tolerated, is decidedly curative, and thus becomes a positive benefit throughout the life of the individual using it. Not so with the use of alcohol, for in the majority of cases the cure is quite as bad as the disease, physically, and not infrequently leaves the patient a moral wreck.

The fats then, chief among which is cod-liver oil, form the main-stay of rational treatment of phthisis. But in the case of this highly-prized remedy we meet with an obstacle at the very door of promised relief. For, if cod-liver oil be nauseating to one in vigorous health, it is positively disgusting to a phthisical patient. Then, too, the system of such a patient is illy-prepared to assimilate the raw oil, and with food within easy reach of him he may die.

Here, however, the chemist and skillful pharmacist come to the relief of physician and patient alike. Nature's methods are studied, the wasted pancreas is assisted by the rest afforded by emulsionized oil. The administration of nutrient salts, as the phosphates of lime and magnesia, give needed energy to the venules and lymphatics, the blood is enriched by the assimilation of milk and other well-balanced foods, while the various symptomatic manifestations, such as cough, night sweats, dyspepsia, hæmorrhage, and general nervous unrest, yield to systemic or special treatment, and finally God's air and sunshine thrown around all, the hope grows stronger daily that the energizing hand of nature may assist our own in leading our patient to renewed life and happiness.

Professor D. W. Yandell, of Louisville.—We regret to learn that this distinguished member of the profession, after suffering several weeks of confinement with rheumatism, has been obliged to visit Florida in the hope of a more perfect recovery.

MEDICAL PROGRESS.

MATERIA MEDICA AND THERAPEUTICS.

The Best Time for Administering Medicines.—*The Midland Medical Miscellany* has an excellent article on this subject, in which it answers the question: Before or after meals? Such is the question often asked of the doctor, but the answer is not always ready. Medicines that are irritating should be given after meals, when the stomach is full, viz.: the salts of copper, zinc, iron and arsenic, in large doses. Small doses, intended to act on the stomach terminals of the vagi, must be given when the organ is empty. Chemical reasons also have their influence, thus, oxide and nitrate of silver, intended for local action, should appear in the stomach during its period of inactivity, lest, at other times, chemical reactions destroy the special attributes for which these remedies are prescribed. Iodine and the iodides further illustrate this point. Given on an empty stomach they promptly diffuse into the blood, but if digestion is going on, the acids and starch form products of inferior activity, and thus the purpose which they were intended to subserve is defeated. Substances prescribed to have alveal action on the mucous membrane, or for prompt diffusion unaltered, are preferably given before meals. The condition of the stomach veins after meals is such as to lessen the activity of diffusion of poisons, and hinders their passage through the liver. It follows that active medicaments in doses near the danger-line, are more safely administered after meals.

When shall acids and alkalies be given, before or after meals? First, as to acids. When acids are prescribed with the view to check the excessive formation of the acids of the gastrie juice, they may be given before meals—as, by the laws of osmosis, they will determine the glandular flow of the alkaline constituents of the blood. The same reasoning would hold good when the alkaline condition of the blood was in excess; osmosis being favored, the acid would reach the blood more readily. Second, as to alkalies. These may be given just before meals, when the acid forming materials in the blood diffuse into the stomach glands, and after digestion is completed, when the alkalies diffuse directly into the blood, without interference from the contents of the stomach. An alkali taken during the time when the reaction of the stomach juices should be strongly acid, must necessarily hinder, if not arrest, the digestive process for the time being. The metallic salts—notably corrosive sublimate, alcohol, tannin, and some other agents—impair or destroy the ferment, or digestive power, of pepsin. Wine that is intended to act as a food, is most beneficial when taken slowly during the course of the meal. The objection as regards the ill effect of alcohol on pepsin, is not applicable here, except to the stronger spirituous wines in large quantities, for the ordinary medicinal wines do not have sufficient alcoholic strength to injure this ferment. Iron, phosphates, cod-liver oil, malt, and similar agents should, as a rule, go with food through

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the digestive process, and with the products of digestion enter the blood.

HYDRASTIS CANADENSIS IN UTERINE DISEASES.—Prof. Schatz, of Rostock, in the *Deutsche Medical Zeitung*, speaks highly of this drug, which he has used in the form of the fluid extract (Parke, Davis & Co.) in functional disturbances of the uterus and ovaries, anomalies of menstruation, and direct or reflex, or simply congestive disturbances, which exclude operation and call for medication. This drug contracts blood-vessels, and thus diminishes congestion of the genital organs. In long-continued or large doses it diminishes the frequency of menstruation; the flow is also diminished, and pain is lessened, and often removed entirely in vaginal hæmorrhage and dysmenorrhœa that has no local cause, as well as in diseases of the uterus and its neighborhood. Its effects are noteworthy in many myomata, the hæmorrhage occasioned by them being much lessened and sometimes entirely prevented. He generally gives twenty drops of the fluid extract four times daily, not only whilst hæmorrhage is actually present, but in preference a week before the anticipated painful or profuse menstruation. This drug occasionally, after lengthened employment, improves the appetite. This from one who, according to the *Medical Press*, from which we quote, has removed the whole uterus at least ten times, is certainly very high recommendation.

SUBCUTANEOUS INJECTION OF IRON.—Experimenting on the behavior of iron within the animal system, Dr. Glacoeke reports in the *Archiv. für Experimente Pathologie und Pharmakol.*, that he has found the ferrum citricum oxydatum to be the best form of iron for subcutaneous injection. No reaction takes place at the site of the puncture. The iron is excreted through the kidneys, not through the glomeruli, but through the epithelium of the tubuli uriniferi. The excretion is complete within twenty-five hours. The liver to a greater extent takes part in the elimination. The injections are made in the long dorsal muscles or in the nates. The solution should not be more than one month old, and for adults doses of 1½ grains in a 10 per cent. solution are recommended.

In the case of an extremely chlorotic girl, in whom the proportion of hæmoglobin in the blood was 38 per cent. of the normal, it rose after fifty-four injections to 82 per cent., and the patient had in the meantime gained sixteen pounds in weight; the menses also, which had been absent for nine months, returned. Good results were also obtained in a case of secondary anæmia from hæmorrhage from the stomach.

If too much iron be injected, toxic effects may be manifested, in the shape of general *malaise*, vomiting and weakness. Diarrhœa may also come on.—*Medical Press.*

GALLIC ACID IN HÆMORRHAGE FROM THE URINARY ORGANS.—Lionel S. Beale, in the *Lancet*, recommends the use of gallic acid in this affection in large doses, and persisted in for several days. As gallic acid probably acts according to the strength of its solution, which bathes the bleeding tissue, it is necessary to insure the introduction of a certain quantity in the blood by the frequent administration of successive doses; as it soon passes away from the blood, being carried off in the urine, we must give it in quantity and often enough to more than compensate for this loss. He has found it valuable in chronic bleeding from the surface of the mucous membrane of the pelvis of the kidney, ureters, bladder, and urethra, and from villous growths, as well as in the very obstinate hæmorrhage from large fungous tumors of the kidney and bladder. The remedy should be given in frequent doses, day and night, until the bleeding is very decidedly reduced in degree, when it may be ordered once in six hours, or less frequently. Gallic acid seldom disagrees in any way. It does not cause constipation, and even when the crystals are swallowed in a state of suspension in water or mucilage, the stomach is not disturbed by their presence. The glycerine of gallic acid is, however, the most pleasant form in which to prescribe the remedy. This contains one part of gallic acid in four. Forty minims will contain ten grains, and may be given in distilled water, peppermint, orange, or other water.

Dr. Beale has given ten-grain doses every three hours, without intermission, for three weeks, no objection having been made on the patient's part.

CONDENSED MARE'S MILK.—The *Lancet* gives a reference to a preparation by a Russian company, called "Carrick's Russian Condensed Mare's Milk Company," which may be found useful in many cases of delicate infantile digestion. The similarity of human milk to that of the mare is well known. Cow's milk is quite unlike both, and it is not wonderful that many infants are unable to digest it. The mare's milk is concentrated to one-eighth by evaporation in vacuo, and is sufficiently preserved by the addition of 3 per cent. of sugar, so that the milk obtained on dilution is not unduly sweet.

OBSTETRICS AND GYNÆCOLOGY.

PHENOMENA OBSERVED AT THE CATAMENIAL PERIODS OF PATIENTS WHO HAVE BEEN SUBJECTED TO PORRO'S OPERATION.—*La France Medicale* reports M. Abel Damour's communication to the Clinical Society on his observations of thirty cases where Porro's operation has been successfully performed, which number embraces about half of all that have survived the operation, as there were only 62 living women. In 23 of these cases the menopause followed the operation without any of the phenomena indicative of a return of the menses. In 8 of the cases, painful sensations alone, or accompanied by a catamenial discharge, were noted. These painful sensations consisted of flushes of heat, a feeling of fullness, cramps, cephalalgia, general fatigue, oppressions, tendency to syncope, disturbance of vision, and noises in the ears.

In a patient operated upon Dec. 30, 1879, by Dr. Championniére, in March, 1880, on going to the

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